US Army Corps of Engineers®
Engineer Research and Development Center

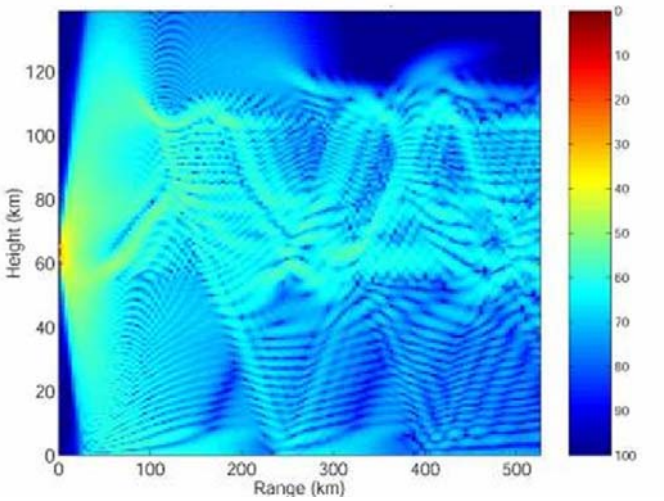
Remote Damage Assessment and Tactical/Persistent Monitoring

Description

Remote damage assessment and tactical/persistent monitoring is designed to eliminate capability gaps in assessing both offensive and defensive damage to urban terrain and transportation infrastructure by using infrasound measurements in conjunction with climatological and seismic-acoustic synergy. Use of this technology helps augment existing human or satellite-reconnaissance (optical and infrared) activities, thus improving monitoring capabilities.

Capabilities

The ERDC Team uses an integrated system of infrasound (sub-audible acoustics), climatological, seismic, and acoustic sensors from standoff to monitor, predict, and assess damage to urban terrain and transportation infrastructure (integrity). This technology provides accurate high-performance computations, data management, and visualization to meet a customer's specific needs by providing constraints at tactical to regional distances and timescales.



Prediction of explosion signals from standoff monitoring

Benefits

The monitoring architecture, sensors, and algorithms developed by the ERDC Remote Damage Assessment and Tactical/Persistent Monitoring Team provide multi-scale awareness for tactical to long-range strategic monitoring requirements.

Success Stories

The ERDC Team has been using urban infrasound data to support several Federal agencies with tactical and persistent monitoring, remote assessment of infrastructure, and persistent monitoring of urban areas for Homeland Defense/Homeland Security applications. In addition, the ERDC Team has provided real-time support to global U.S. and allied assets that require rapid, integrated geophysical snapshots of the changing battlespace from standoff with a high degree of confidence.

ERDC POCs

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